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| 09/915,811 | 07/26/2001 | Michael Lohman | PD-201096 | 7898 |

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Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) |
| :---: | :--- | :--- |
| **Office Action Summary** | 09/915,811 | LOHMAN ET AL. |
| | Examiner | Art Unit | |
| | Kevin Mew | 2664 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *26 July 2001*.

2a)☐ This action is **FINAL**.          2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-51* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47,50 and 51* is/are rejected.

7)☒ Claim(s) *48 and 49* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *7/26/2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

## *Detailed Action*

### *Specification*

1.      The abstract of the disclosure is objected to because "[0072]" should not be included in

the abstract page.  Correction is required.  See MPEP § 608.01(b).

### *Claim Objections*

2.      Claims 34, 49, 50 are objected to because of the following informalities:

In claim 34, line 13, replace "said status" with "a status."

In claim 49, line 2, replace "said octal" with "a plurality of octal."

In claim 50, line 4, replace "instruction" with "instructions."

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.  Patentability shall not be negatived by the manner in which the invention was made.

3.      Claims 1, 4-24, 27-33, 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Voit et al. (USP 6,829,250) in view of Alspaugh et al. (US Publication 2004/0213189).

Regarding claim 1, Voit discloses a communications system (see Fig. 15) comprising:

a hub (ADN ATM switch, see element 123, Fig. 15) for interfacing with a network (for

interfacing with an ATM frame relay network, see element 129, Fig. 15); and

an integrated Digital Subscriber Line Access Multiplexer (DSLAM) (DSLAM, see

element 111, Fig. 15) adapted to communicate data between said hub (DSLAM is adapted to

communicate data between ADN ATM switch and DSLAM, see col. 4, lines 28-43) and said

DSLAM via a DS3 link (via a DS3 link, see element 119, Fig. 15), wherein said hub has a direct

access to queue utilization levels within said DSLAM (DSLAM is programmed to regulate

traffic to the upstream and downstream rates corresponding to the grade of service associated

with each customer, see col. 5, lines 1-9).

Voit does not explicitly disclose the said hub is a wireless hub nor the said DS3 link is a

wireless link.

However, Alspaugh discloses that the link between ATM switch and R-DSLAM is

implemented as a wireless link (see Fig. 4 and paragraph 0060). Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the DS3

link connection between the DSLAM and the ADN ATM switch in Voit such that the link

between DSLAM and ADN ATM switch is implemented as a wireless link such as the wireless

link between ATM switch and DSLAM taught by Alspaugh. The motivation to do so is to

provide a 44.736 Mbps of high rate transmission of ATM cells over the convenience of a

wireless transmission medium.


Regarding claim 4, the combined system of Voit and Alspaugh discloses the

communication system of claim 1, Alspaugh further discoses said wireless data further

comprises a cellular signal (see Fig. 4).

Regarding claim 5, the combined system of Voit and Alspaugh discloses the

communication system of claim 1. Voit also discloses said queue utilization levels further

comprises Asynchronous Transfer Mode (ATM) queue utilization levels (ATM switch queue

priority based on rate requirements, see col. 9, lines 55-67 and col. 10, lines 1-12).


Regarding claim 6, Voit further discloses the communication system of claim 1, wherein

said queue utilization levels further comprises Internet Protocol (IP) queue utilization levels

(different IP data services require different rates, see col. 10, lines 1-32).


Regarding claim 7, Voit further discloses the communication system of claim 1, wherein

said wireless hub and WDSLAM have a single feature set (a feature set of queuing operations,

see col. 9, lines 55-67).


Regarding claim 8, Voit further discloses the communication system of claim 7, wherein

said single feature set comprises an ATM feature set (ATM cell traffic, see col. 9, lines 55-67).


Regarding claim 9, Voit further discloses the communication system of claim 7, wherein

said single feature set comprises an Internet Protocol (IP) feature set (IP traffic, see col. 10, lines

13-32).


Regarding claim 10. Voit further discloses the communication system of claim 1, wherein

said wireless hub has access to the queue utilization levels on a per line Digital Subscriber Line

(DSL) basis (ADN ATM switch has access to each communication rate of each DSL line and a

bandwidth is allocated in response to each rate, see col. 18, lines 9-44).

Regarding claim 11, Voit further discloses the communication system of claim 1, wherein

each queue is assigned a Quality of Service (QOS) class having a priority level (see col. 9, lines

55-67 and col. 10, lines 1-12).

Regarding claim 12, Voit further discloses the communication system of claim 1, wherein

said wireless hub allocates bandwidth between said wireless hub and at least one WDSLAM

based on at least one of:

a quality of service (QOS) class for pre-assigning a priority and quality level to data (a

first level of QoS is provided based on priority and the type of service required, see col. 19, lines

10-67);

a Service Level Agreement (SLA) for determining bandwidth guarantees between a user

and a service provider (service level agreement SLA corresponds to a different rate/bandwidth

between a subscriber and a service provider, see col. 18, lines 29-44); and

the queue utilization levels for determining queues that are at capacity (communication

rates determines different logic pipes for data transmission, see col. 18, lines 9-44).

Regarding claim 13, the combined system of Voit and Alspaugh discloses the

communication system of claim 1. Voit further discloses said network includes an Asynchronous

Transfer Mode (ATM) network (ATM cell relay network, see element 129, Fig. 14).

Regarding claim 14, the combined system of Voit and Alspaugh discloses the

communication system of claim 1, wherein said network includes an Internet Protocol (IP)

network (ISP network, see element 132, Fig. 15).

Regarding claim 15, Voit discloses the communication system of claim 1, wherein

said interface is made via a digital carrier (DS3, see Fig. 15).

Regarding claim 16, Voit discloses the communication system of claim 15, wherein

said digital carrier comprises at least one of:

   a Digital Signal Level 1 (DS1);

   a Digital Signal Level 2 (DS2); and

   a Digital Signal Level 3 (DS3, see Fig. 15).

Regarding claim 17, Voit discloses the communication system of claim 1, wherein

said interface is made via an optical carrier (SONET, see Fig. 15).

Regarding claim 18, Voit discloses the communication system of claim 17, wherein

said optical carrier comprises at least one of:

   an Optical Carrier Level 1 (OC-1);

   an Optical Carrier Level 3 (OC-3, see Fig. 15);

   an Optical Carrier Level 12 (OC- 12);

an Optical Carrier Level 48 (OC-48);

an Optical Carrier Level 96 (OC-96); and

an Optical Carrier Level 192 (OC-192).

Regarding claim 19, Voit discloses a method for communicating in a communication

system comprising:

transmitting from an integrated Digital Subscriber Line Multiplexer (WDSLAM)

(providing rate-shaping for the ATM virtual circuits, see col. 16, lines 1-19), a signal, said

signal including status information of queue utilization levels within said WDSLAM (DSLAM

implements a rate-adaptive ADSL service so as to maximize data rates for the communications

over the individual subscriber lines and provide rate shaping for the ATM virtual circuits, see

col. 16, lines 1-19);

receiving said signal, at a hub (receiving rate-shaping at ADN-ATM switch, see col. 16,

lines 1-19);

selectively allocating bandwidth to said integrated WDSLAM in response to the queue

utilization level of said WDSLAM (allocating different bandwidths in response different rates

required for each service, see col. 18, lines 29-44).

Voit does not explicitly disclose the said hub is a wireless hub nor the said DS3 link is a

wireless link.

However, Alspaugh discloses that the link between ATM switch and R-DSLAM is

implemented as a wireless link (see Fig. 4 and paragraph 0060). Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the DS3

link connection between the DSLAM and the ADN ATM switch in Voit such that the link

between DSLAM and ADN ATM switch is implemented as a wireless link such as the wireless

link between ATM switch and DSLAM taught by Alspaugh. The motivation to do so is to

provide a 44.736 Mbps of high rate transmission of ATM cells over the convenience of a

wireless transmission medium.

Regarding claim 20, Voit further discloses the method of claim 19, wherein said step of

selectively allocating bandwidth comprises determining queue utilization levels on a per line

Digital Subscriber Line (DSL) basis (each communication rate corresponds to each DSL line and

a bandwidth is allocated in response to the rate, see col. 18, lines 9-44).

Regarding claim 21, Voit further discloses the method of claim 19, wherein said status

information comprises bandwidth guarantees for data associated with a user (see col. 18, lines

29-44).

Regarding claim 22, Voit further discloses the method of claim 19, further comprising:

allocating bandwidth (allocating bandwidth) in a weighted round robin manner among

WDSLAMs in response to determining data in queues awaiting transport to said wireless hub for

said WDSLAMs have the same priority level (Weighted Fair Queuing WFQ, see col. 19, lines

58-67, col. 20, lines 1-63).

Regarding claim 23, Voit further discloses the method of claim 19, further comprising:

allocating bandwidth in a manner determinative of the WDSLAM having the highest

queue priority level (Priority Queuing PQ, see col. 19, lines 58-67, col. 20, lines 1-63).


Regarding claim 24, Voit further discloses the method of claim 19, wherein the greatest

amount of bandwidth is assigned to the WDSLAM having queues with the highest priority and

utilization level (see col. 5, lines 34-45).


Regarding claim 27, the combined system of Voit and Alspaugh discloses the method of

claim 19. Alspaugh further discloses said wireless data further comprises a cellular signal (see

Fig. 4).


Regarding claim 28, the combined system of Voit and Alspaugh discloses the method of

claim 19. Voit also discloses said queue utilization levels further comprises Asynchronous

Transfer Mode (ATM) queue utilization levels (ATM switch queue priority based on rate

requirements, see col. 9, lines 55-67 and col. 10, lines -12).


Regarding claim 29, Voit further discloses the method of claim 19, wherein said queue

utilization levels further comprises Internet Protocol (IP) queue utilization levels (different IP

data services require different rates, see col. 10, lines 1-32).

Regarding claim 30, Voit further discloses the method of claim 19, wherein said wireless

hub and WDSLAM have a single feature set (a feature set of queuing operations, see col. 9, lines

55-67).


Regarding claim 31, Voit further discloses the method of claim 30, wherein said single

feature set comprises an ATM feature set (ATM cell traffic, see col. 9, lines 55-67).


Regarding claim 32, Voit further discloses the method of claim 30, wherein said single

feature set comprises an Internet Protocol (IP) feature set (IP traffic, see col. 10, lines 13-32).


Regarding claim 33, Voit further discloses the method of claim 19, wherein said wireless

hub has access to the queue utilization levels on a per line Digital Subscriber Line (DSL) basis

(ADN ATM switch has access to each communication rate of each DSL line and a bandwidth is

allocated in response to each rate, see col. 18, lines 9-44).


Regarding claim 50, Voit discloses an apparatus (central office) for communicating

wireless information, comprising:

a processor (DSLAM ) and are associated storage device (MUX) including instructions

for controlling said processor, said instructions, when executed, causing said processor to

perform the steps of:

transmitting from an integrated Digital Subscriber Line Multiplexer (WDSLAM)

(providing rate-shaping for the ATM virtual circuits, see col. 16, lines 1-19), a signal, said

signal including status information of queue utilization levels within said WDSLAM (DSLAM

implements a rate-adaptive ADSL service so as to maximize data rates for the communications

over the individual subscriber lines and provide rate shaping for the ATM virtual circuits, see

col. 16, lines 1-19);

receiving said signal, at a hub (receiving rate-shaping at ADN-ATM switch, see col. 16,

lines 1-19);

selectively allocating bandwidth to said integrated WDSLAM in response to the queue

utilization level of said WDSLAM (allocating different bandwidths in response different rates

required for each service, see col. 18, lines 29-44).

Voit does not explicitly disclose the said hub is a wireless hub nor the said DS3 link is a

wireless link.

However, Alspaugh discloses that the link between ATM switch and R-DSLAM is

implemented as a wireless link (see Fig. 4 and paragraph 0060). Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the DS3

link connection between the DSLAM and the ADN ATM switch in Voit such that the link

between DSLAM and ADN ATM switch is implemented as a wireless link such as the wireless

link between ATM switch and DSLAM taught by Alspaugh. The motivation to do so is to

provide a 44.736 Mbps of high rate transmission of ATM cells over the convenience of a

wireless transmission medium.

Regarding claim 51, Voit discloses a method for communicating in a communication system comprising:

receiving data from a modem at an integrated Digital Subscriber Line Multiplexer (WDSLAM) (receiving rate-shaping at ADN-ATM switch from DSLAM, see col. 16, lines 1-19);

assigning said data to pre-assigned queues having associated with said queues priority levels (assigning queues with different priority levels based on the communication rates, see col. 9, lines 55-67, col. 10, lines 1-12);

determining utilization levels of said queues (determining different levels of rate shaping, see col. 9, lines 55-67, col. 10, lines 1-12);

transmitting from an integrated Digital Subscriber Line Multiplexer (DSLAM) (providing rate-shaping for the ATM virtual circuits, see col. 16, lines 1-19), a signal, said signal including status information of queue utilization levels within said DSLAM (DSLAM implements a rate-adaptive ADSL service so as to maximize data rates for the communications over the individual subscriber lines and provide rate shaping for the ATM virtual circuits, see col. 16, lines 1-19);

receiving said signal, at a hub (receiving rate-shaping at ADN-ATM switch, see col. 16, lines 1-19);

selectively allocating bandwidth to said integrated WDSLAM in response to the queue utilization level of said WDSLAM (allocating different bandwidths in response different rates required for each service, see col. 18, lines 29-44).

Voit does not explicitly disclose the said hub is a wireless hub nor the said DS3 link is a wireless link.

However, Alspaugh discloses that the link between ATM switch and R-DSLAM is

implemented as a wireless link (see Fig. 4 and paragraph 0060). Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the DS3

link connection between the DSLAM and the ADN ATM switch in Voit such that the link

between DSLAM and ADN ATM switch is implemented as a wireless link such as the wireless

link between ATM switch and DSLAM taught by Alspaugh. The motivation to do so is to

provide a 44.736 Mbps of high rate transmission of ATM cells over the convenience of a

wireless transmission medium.

Voit further discloses communicating data to said DSLAM based on the priority level of

the queues (regulates downstream traffic based on the particular grade of service, see col. 5, lines

1-10), except fails to disclose the data is wireless. However, Alspaugh discloses that the link

between ATM switch and R-DSLAM is implemented as a wireless link (see Fig. 4 and paragraph

0060). Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the DS3 link connection between the DSLAM and the ADN ATM

switch in Voit such that the link between DSLAM and ADN ATM switch is implemented as a

wireless link such as the wireless link between ATM switch and DSLAM taught by Alspaugh.

The motivation to do so is to provide a 44.736 Mbps of high rate transmission of ATM cells over

the convenience of a wireless transmission medium.

4.      Claims 34-36, 38-41, 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Alspaugh et al. (US Publication 2004/0213189) in view of Voit et al. (USP 6,829,250).

Regarding claims 34, 38, Alspaugh discloses an apparatus for communicating in a

communications system, said apparatus comprising:

an integrated wireless Digital Subscriber Line Multiplexer (WDSLAM) (Remote

DSLAM, see Fig. 7) having an interface card (Master Unit, see element 51, Fig. 7) for

interfacing with a digital landline network (interfacing with customer premises through the trunk

interface, see Figs. 4 and 7) and a wireless network (backhaul wireless ATM network, see

paragraph 0055 and Fig. 4), said interface card including:

a channel and conference module (CCM) (SAR, see element 32, Fig. 7) adapted

to converting a digital signal to a wireless signal (which assemble information into an ATM

format for transmission to a wireless ATM network through a backhaul connection, see Fig. 7);

a service specific interface field programmable gate array (SSI-FPGA) module (port unit,

see element 35, Fig. 7) coupled to the CCM for providing a timed digital signal to said CCM

(providing Ethernet format signal to SAR, see Fig. 7); and

Alspaugh does not explicitly disclose a processor coupled to the SSI-FPGA for

monitoring queue utilization levels and informing a wireless hub of a status information.

However, Voit discloses a DSLAM that regulates upstream and downstream rates

corresponding to the grade of service of each DSL subscriber (see col. 5, lines 1-10) and the

ATM switch (the hub) will be informed of the queue importance level for each permanent virtual

circuit (see col. 9, lines 55-67, col. 10, lines 1-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the DSLAM functions of Alspaugh with the teaching of Voit

such that the DSLAM comprises a processing means that couples to the port unit of R-DSLAM

in Alspaugh in order to monitor traffic communication rates and provide queue importance level

for each permanent virtual circuit to the ADN ATM switch. The motivation to do so is to

allocate different bandwidth and QoS level to each DSL line that may command a different

communication rate.

Regarding claim 35, the combined system of Alspaugh and Voit further discloses the

apparatus of claim 34 comprising: Digital Subscriber Line (DSL) drivers (DSL trunk interfaces,

see Fig. 8) are coupled to said processor for serving as an interface between said interface card

and at least one subscriber (interfacing between DSL subscriber lines in Fig. 8 and the master

unit of DSLAM in Fig. 7).

Regarding claim 36, Alspuagh further discloses the apparatus of claim 35, wherein said

digital signal includes an Asynchronous Transport Medium (ATM) signal (ATM cells in the

wireless ATM network, see Fig. 7).

Regarding claim 39, Alspaugh further discloses the apparatus of claim 35, wherein a

backplane (Utopia) couples the CCM and the SSI-FPGA (that couples SAR and Port Unit, see

Fig. 7).

Regarding claim 40, Alspaugh further discloses the apparatus of claim 39, wherein the

backplane includes a Service Specific Interface (SSI) bus (Utopia buses, see Fig. 7).

Regarding claim 41, Alspaugh further discloses the apparatus of claim 38, wherein a

Utopia-2 bus (Utopia buses) couples (that couples with) said ATM chipset (ATM switch fabric),

SSI-FPGA (port unit), control processor (processor unit) and octal line drivers (DSL trunk

interfaces, see Fig. 7).

Regarding claim 44, the combined system of Voit and Alspaugh discloses the apparatus

of claim 34. Alspaugh further discloses said wireless data further comprises a cellular signal (see

Fig. 4)

Regarding claim 45, the combined system of Voit and Alspaugh discloses the apparatus

of claim 35, except fails to disclose said digital signal includes an Internet Protocol (IP) signal.

However, Voit discloses IP data services that couple to ADN network (see Fig, 1). Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to

modify the combined system of Alspaugh and Voit with the further teaching of Voit such that the

digital signal includes an IP signal. The motivation to do so is to provide high-end vertical IP

data services requiring certain QoS levels.

Regarding claims 46, 47, the combined system of Voit and Alspaugh discloses the

apparatus of claim 45, except fails to disclose said processor includes a communications

processor for grouping IP packets based on Quality of Service (QOS) class. However, Voit

discloses providing IP-services through an IP interface (see Fig. 1) based on QoS levels (see col.

14, lines 45-54). Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the combined system of Alspaugh and Voit with the

further teaching of Voit such that the R-DSLAM of Alspaugh will comprise an IP interface (a

communications processor) to provide IP data services based on QoS and to communicate rate

information on IP packets to a ATM switch. The motivation to do so is to provide Internet

access service of the Internet Service Provider based on the grade level of service subscribed to

by the customers.


5.      Claims 2-3, 25-26, 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Voit et al. (USP 6,829,250) in view of Alspaugh et al. (US Publication 2004/0213189), and in

further view of Scott (US Publication 2005/0135247).

        Regarding claim 2, the combined system of Voit and Alspaugh discloses all the aspects

of the claimed invention set forth in the rejection of claim 1 above, except fails to disclose the

communication system of claim 1, wherein said wireless data further comprises a Code Division

Multiple Access (CDMA) signal. However, Scott discloses that wireless data are implemented

as CDMA signals (see paragraph 0123). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify the DS3 link connection

between the DSLAM and the ADN ATM switch in Voit with the teaching of Scott in

implementing the wireless data as CDMA signals. The motivation to do so is allow wireless data

to be communicated between the ATM switch and the DSLAM in accordance with the CDMA

communications standard.


Regarding claim 3, the combined system of Voit and Alspaugh discloses the

communication system of claim 1, wherein said wireless data further comprises a Time Division

Multiple Access (TDMA) signal. However, Scott discloses that wireless data are implemented

as TDMA signals (see paragraph 0123). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify the DS3 link connection

between the DSLAM and the ADN ATM switch in Voit with the teaching of Scott in

implementing the wireless data as TDMA signals. The motivation to do so is allow wireless data

to be communicated between the ATM switch and the DSLAM in accordance with the TDMA

communications standard.


Regarding claim 25, the combined system of Voit and Alspaugh discloses all the aspects

of the claimed invention set forth in the rejection of claim 19 above, except fails to disclose the

method of claim 19, wherein said wireless signal further comprises a Code Division Multiple

Access (CDMA) signal. However, Scott discloses that wireless data are implemented as CDMA

signals (see paragraph 0123). Therefore, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to modify the DS3 link connection between the

DSLAM and the ADN ATM switch in Voit with the teaching of Scott in implementing the

wireless data as CDMA signals. The motivation to do so is allow wireless data to be

communicated between the ATM switch and the DSLAM in accordance with the CDMA

communications standard.

Regarding claim 26, the combined system of Voit and Alspaugh discloses the method of

claim 19, wherein said wireless data further comprises a Time Division Multiple

Access (TDMA) signal. However, Scott discloses that wireless data are implemented as TDMA

signals (see paragraph 0123). Therefore, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to modify the DS3 link connection between the

DSLAM and the ADN ATM switch in Voit with the teaching of Scott in implementing the

wireless data as TDMA signals. The motivation to do so is allow wireless data to be

communicated between the ATM switch and the DSLAM in accordance with the TDMA

communications standard.

Regarding claim 42, the combined system of Voit and Alspaugh discloses all the aspects

of the claimed invention set forth in the rejection of claim 34 above, except fails to disclose the

apparatus of claim 34, wherein said wireless signal further comprises a Code Division Multiple

Access (CDMA) signal. However, Scott discloses that wireless data are implemented as CDMA

signals (see paragraph 0123). Therefore, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to modify the DS3 link connection between the

DSLAM and the ADN ATM switch in Voit with the teaching of Scott in implementing the

wireless data as CDMA signals. The motivation to do so is allow wireless data to be

communicated between the ATM switch and the DSLAM in accordance with the CDMA

communications standard.


Regarding claim 43, the combined system of Voit and Alspaugh discloses the apparatus

of claim 34, wherein said wireless data further comprises a Time Division Multiple

Access (TDMA) signal.   However, Scott discloses that wireless data are implemented as TDMA

signals (see paragraph 0123).  Therefore, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to modify the DS3 link connection between the

DSLAM and the ADN ATM switch in Voit with the teaching of Scott in implementing the

wireless data as TDMA signals.  The motivation to do so is allow wireless data to be

communicated between the ATM switch and the DSLAM in accordance with the TDMA

communications standard.


6.      Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Voit et al. (USP

6,829,250) in view of Alspaugh et al. (US Publication 2004/0213189), and in further view of

Lauffenburger et al. (USP 6,657,961).

Regarding claim 37, Alspaugh further discloses the apparatus of claim 36, further

comprising: an ATM chip set (ATM switch fabric, see Fig. 7) for storing ATM information,

except fails to disclose it is in accordance with ATM Standards Traffic Management 4.0.

However, Lauffenburger discloses a data flow control system and method that uses ATM

4.0 specification (see col. 4, lines 21-58).  Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify the combined system of

Alspaugh and Voit such that the ATM communication is in conformance with the ATM

Standards Traffic Management 4.0. The motivation to do so is to take advantage of the

XON/XOFF capability to allow receiving end station to stop or reduce data flow and to restart

data flow at a desired rate.

### *Allowable Subject Matter*

7.     Claim 48 is objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims.

Claim 49 is objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims, and if the objection to claim 49 described above can be overcome.

The following is a statement of reasons for the indication of allowable subject matter:

In claim 48, the apparatus of claim 47, wherein a Utopia-3 bus (Utopia buses) couples

said SSI-FPGA (port unit) to said communications processor.

## *Conclusion*

8.    The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

US Publication 2005/0089052 to Chen et al.

US Publication 2001/0048683 to Allan et al.

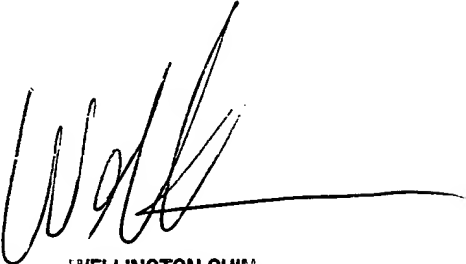US Publication 2005/0047355 to Wood et al.

US Publication 2005/0122925 to Chitre et al.

US Publication 2004/0257997 to Loewen et al.

9.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The

examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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